REMARKS

By this Amendment, claims 3 and 4 are amended, claims 1, and 10-11 are canceled, and claim 14 is added. Accordingly, claims 2-9 and 12-14 are pending in this application. No new matter is presented in this Amendment.

The Patent and Trademark Office (PTO) rejects claims 1-5 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a), as obvious over U.S. Patent No. 4,379,109 to Simpson.

A rejection based on 35 U.S.C. §102 requires every element of the claim to be included in the reference, either directly or inherently. The disclosure of Simpson does not teach or suggest all of Applicant's claim limitations. Further, to establish a prima facie case of obviousness under 35 U.S.C. §103(a), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. This rejection is respectfully traversed.

Independent claim 2 recites, *inter alia*, a ceramic slurry composition for use in the production of a thin green sheet, wherein the ultrahigh molecular weight polymer and the relative low molecular weight polymer be added to 2~10wt% and 1~5wt% respectively. Simpson fails to disclose this composition.

Furthermore, notwithstanding the assertions of the PTO that Simpson discloses that high molecular weight polyethylene can be blended with standard lower weight polyethylene, the PTO acknowledges that Simpson fails to disclose specific amounts of a composition in the explicit amounts recited in claim 2. The PTO further asserts that the amount of lower molecular weight polyethylene is a result effective variable and it would be obvious to one of ordinary skill in the art to utilize an amount of polyethylene, as recited in claim 2. Applicant respectfully disagrees.

MLCC (multilayer ceramic capacitor) are known to be fabricated by alternately laminating ceramic green sheets and internal electrodes, and pressing and sintering the laminated structure. The green sheet is produced using the ultra-high molecular weight polymer, and a problem exists of a poor interlayer adhesive strength when laminated and pressed, thus causing cracks and delamination. Furthermore, if the cracks between layers occur due to its poor interlayer adhesive

strength, it cannot be utilized in the fabrication of 30 layers or more chip components. The lamination of green sheets into 40 or more layers for fabricating high performance electronic devices causes a problem of pillowing.

In order to solve the above problems, claim 2 recites an optimized slurry composition for the green sheet for MLCC which can be laminated to form a stack, several tens of layers thick, by increasing the interlayer adhesive strength between the green and the internal electrodes.
Specifically, the Applicant's green sheet comprises a polymer having hydrogen bond-forming functional groups so as to increase green sheet strength.

Further, the green sheet composition, as recited in claim 2, should contain a polymer having a weight-average molecular of 400,000 or more and a polymer having a weight-average molecular of 400,000 or less. By combining the ultrahigh molecular weight polymer and the relative low molecular weight polymer in the present invention, the repulsive force between an electrode layer and green sheets can be reduced, so that the lamination of the layers can be facilitated.

The PTO asserts that that Simpson not only discloses the green sheet composition overlapped with that of the Applicant's but also the combination of the ultrahigh molecular weight polymer and the relative low molecular weight polymer, as recited in claim 2.

However, Simpson only appears to describe a method of making ceramic monolithic structure having a plurality of flow channel therethrough, and the use of such structure as a high temperature filter and heat exchanger. Nowhere does Simpson disclose, teach or suggest manufacturing the green sheet for MLCC.

Further, the ultrahigh molecular weight polymer is added to the relative low molecular weight polymer, as recited in claim 2, so as to increase the interlayer adhesive strength between the green sheet and the internal electrodes, and to facilitate the lamination of the layers. Simpson fails to disclose this feature.

Simpson only appears in the detailed description (column 3, lines 10-16), to disclose the combination of polymers so as to avoid consequent brittleness of the green sheet. It could be understood that Simpson does not teach nor suggest the technical feature of adding the ultrahigh molecular weight polymer and the relative low molecular weight polymer as is in the present invention.

Accordingly, because Simpson does not disclose, teach or suggest each and every feature

recited in claim 2, the rejection of claim 2 under 35 U.S.C. §102(b) is improper. Furthermore, the failure of Simpson to suggest a slurry composition, as claimed.

Applicant respectfully submits, therefore, that independent claim 2 is patentable over Simpson. Applicant respectfully submits that claims 3-5, 9, and 12-13 are likewise patentable over Simpson at least for their dependence on an allowable base claim, as well as for additional features it/they recite. Withdrawal of the rejection over Simpson is respectfully requested.

The PTO further rejects claims 10-13 under 35 U.S.C. §103(a) over Simpson in view of U.S. Patent No. 5,268,415 to Pieterse et al. ("Pieterse"). This rejection is respectfully traversed.

As noted above, claims 10 and 11 are canceled. Claims 12 and 13 depend from claim 2 and notwithstanding any teachings of Pieterse, in regards to the use of various solvents, Applicant respectfully submits that in a manner similar to Simpson, Pieterse fails to disclose a ceramic slurry comprising a polymer having a weight-average molecular of 400,000 or more and a polymer having a weight-average molecular of 400,000 or less, as recited in claim 2.

Therefore, claims 12 and 13 are likewise patentable over the applied art for at least their dependence on an allowable base claim, as well as for the additional features they recite. Accordingly, withdrawal of this rejection is respectfully requested.

New claim 14 depends from independent claim 2 and is likewise patentable.

All objections and rejections have been addressed. In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance and favorable reconsideration and prompt allowance of claim 2-5, 9, and 12-14 is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Attachment:
Petition for Extension of Time

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BJH/ERM/ayw